REMARKS

Claims 1, 2, 4-10, 12-18 and 20-24 are pending in the application. Of the claims, Claims 1, 9, and 17 are independent claims. Claims 1, 1, 2, 4-10, 12-18 and 20-24 are rejected under 35 U.S.C. § 103(a) as being deemed unpatentable over Muller et al. (U.S. Patent Number 6,021,132) in view of Singh et al. (U.S. Patent No. 6,625,159). That rejection is respectfully traversed and reconsideration is requested.

Regarding Claim Objections

Claims 4-6, 12 and 20 are objected to because they are dependent on canceled Claims. In response, Claims 4-6, 12 and 20 have been amended to correct dependency. Removal of the objections to claims 4-6, 12 and 20 is respectfully requested.

Regarding Rejections under 35 U.S.C. 103(a)

The applicant's disclosed invention provides reserved pools of buffers in the shared memory. Each reserved pool of buffers is associated with one of the plurality of egress ports and is reserved for storing data to be forwarded through the egress port. The shared memory also includes a shared pool of buffers for storing data to be forwarded through any of the plurality of egress ports and a multicast pool of buffers reserved for storing IP Multicast packets. By providing a reserved multicast pool of buffers for storing IP Multicast packets, even if one congested port is using all of its reserved buffers and all available buffers in the shared pool of buffers in the shared memory, buffers are available from the multicast pool for storing a received IP Multicast packet. *(See* Applicant's Specification Fig. 2, shared memory (108) reserved pool of buffers (202), shared pool (200); multicast pool (204).)

The cited prior art, Muller is directed to a switch having a single common pool of memory (shared memory) that is shared by all of the input ports and output ports of the switch. (See Col. 6, lines 60-63; Fig. 3A, shared memory (230).) The single common pool of memory includes buffers that have been allocated to ports and free buffers that are available for allocation to any of the input and output ports. All buffers are allocated to ports from the single common pool of memory including buffers that are allocated for storing IP Multicast data packets. Thus,

Muller's discussion of a single common pool of buffers shared by all of the input and output ports does not teach or suggest the Applicant's claimed "multicast pool of buffers in the shared memory reserved for storing IP Multicast data packets". In contrast, Muller's single common pool of memory is shared by all of the input and output ports of the switching element and all buffers including buffers for storing IP Multicast data packets are allocated from the single common pool of buffers. Muller's discussion of storing one copy of an IP Multicast data packet in the shared memory does not teach or suggest a "multicast pool of buffers in the shared memory reserved for storing IP Multicast data packets" (emphasis added.)

Cited prior art Singh discusses an input buffered switch having shared memory. The shared memory includes reserved buffers for each input port and unreserved buffers that are shared by the input ports. Buffers are allocated from the unreserved buffers for storing multicast packets or a subset of the buffers reserved for an input port may be further reserved for storing multicast packets received by the input port. (*See* Col. 5, lines 31- Col. 6, line 3.)

Thus, singly or in combination, Muller and Singh do not teach or suggest a multicast pool of buffers shared by the egress ports for storing IP Multicast packets. In contrast, in the Applicant's claimed invention, each reserved pool of buffers is associated with one of a plurality of egress ports and a multicast pool of buffers is reserved for storing IP Multicast packets received from any ingress port.

Claims 2 and 4-8 are dependent on Claim 1 and thus include this limitation over the prior art. Furthermore the dependent claims recite further limitations that are neither taught or suggested by the cited prior art.

Claim 4 recites "the pool select logic selects a free buffer from the multicast pool upon detecting an IP Multicast data packet received from an ingress port". Neither Muller or Singh, singly or in combination teach or suggest the Applicant's claimed "multicast pool" and thus, do not teach or suggest "selecting a free buffer from the multicast pool" as claimed by the applicants in dependent claim 4.

Claim 5 recites "the sum of the buffers in the multicast pool, the reserved pool and the shared pool is greater than the total number of buffers in the shared memory". Muller discusses a single common pool of buffers. With only a single common pool of buffers shared by all of the ports, it is not possible to oversubscribe the pools, that is, "the sum of the buffers in the multicast

pool, the reserved pool and the shared pool is greater than the total number of buffers in the shared memory" as claimed by the applicants in dependent claim 5 and described in the applicant's specification on Page 8, lines 8-21. Singh does not add to Muller the present invention's ability to oversubscribe the pools as argued above.

Independent Claim 17 recites a like distinction in terms of a method and thus similarly patentably distinguishes over the prior art. Claims 18 and 20-24 are dependent on Claim 17 and thus include this limitation over the prior art. Independent Claim 9 and claims dependent on Claim 9 include like limitations distinguishing the cited art.

Therefore, separately or in combination, Muller and Singh do not teach or suggest the Applicants' claimed invention. Thus, none of the cited prior art alone or in combination makes obvious the Applicants' claimed method for reducing pool starvation in a shared memory switch.

Accordingly, the present invention as now claimed is not believed to be made obvious from the cited art or any of the prior art. Removal of the rejections under 35 U.S.C. 103(a) and acceptance of Claims 1-2, 4-10, 12-18 and 20-24 is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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